



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/521,733

09/08/2005

Takeshi Fujisawa

1843.1002

6905

21171 7590 03/03/2008

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

BUTTNER, DAVID J

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,733	Applicant(s) FUJISAWA ET AL.	
	Examiner David Buttner	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) 3-6, 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7-9, 11, 12, 15-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claims 1,2,7-9,11,12 and 15-19 rejected under 35 U.S.C. 103(a) as being unpatentable over JP06234911 in view of JP11080535 or EP1148097 optionally in further view of the Concise Encyclopedia of Polymer Science of Polymer Science and Engineering.

JP06234911 exemplifies (table 1) blends of PPE, styrenic resin, SEPS2104, SEPS4055, grafted polyolefin and stabilizer. SEPS2104 is a hydrogenated styrene-isoprene-styrene block polymer that has 65% styrene qualifies as applicant's (B). SEPS4055 is a hydrogenated styrene-isoprene-styrene block polymer that has 33% styrene. The examiner is unaware of the amount of vinyl bonds in SEPS4055. However, it is known that high amounts of vinyl content in hydrogenated styrene/diene block polymers are favorable in PPE compositions. JP'535 (paragraph 13) teaches a high vinyl content improves damping, while EP'097 (paragraph 42) teaches the high content improves impact strength. It would have been obvious to ensure the hydrogenated styrene-isoprene-styrene block polymer has a high vinyl content for the expected advantages.

In regards to claim 2's MW, the primary reference's PPE (paragraph 18) has a limiting (ie reduced) viscosity very close to that of applicant (page 15 line 8,12) and therefore must have a very close Mw. Additionally, injection/extrusion grade PPE is generally known to have a Mw of ~40,000 and a Mn of ~18,000 (see Concise Encyclopedia of Polymer Science and Engineering). One would expect the primary reference's Mw/Mn to be within applicant's range also.

In regards to claim 19, butadiene can be used in lieu of isoprene to form the diene block.

Kurasawa 2002/0035206 (paragraph 76) and Hakamaya '964 (col 9 line 17) are cited for their description of SEPS2104 and SEPS4055.

Applicant's arguments filed 2/13/08 have been fully considered but they are not persuasive.

Applicant argues that SEPS4055 of the primary reference has a low Tg and therefore could not have a high vinyl content.

This is unconvincing for several reasons. Nothing of record actually reports the Tg of SEPS 4055. Applicant has included an excerpt from the Kuraray website, but it never specifically mentions SEPS4055. Secondly, the "low Tg therefore low vinyl content" conclusion of applicant is not a fact the examiner knows to be true. Finally, JP06234911 is not limited to SEPS4055 as the low styrene content block polymer. The reference is open to any A-B-A (ie styrene-diene-styrene) block polymer having a styrene content under 50% (abstract). No mention of Tg or vinyl content for this block polymer is present in the reference. Any low styrene A-B-A block polymer would be prima facie obvious – including low vinyl or high vinyl A-B-A block polymers.

Applicant argues that the secondary references JP11080535 and EP1148097 do not contain all three required polymers of applicant's claims (lacking applicant's B).

Of course these secondary references lack some element of applicant's claims. These references would have been applied as anticipatory if either possessed all of applicant's requirements. One cannot show nonobviousness by attacking references

individually where the rejection is based on a combination of references (MPEP2145 IV).

Applicant argues claim 18's 60-70% limitation on the aromatic vinyl (eg styrene) content of (B) is not met by the references.

This is not understood. SEPS2104 has 65% styrene.

Applicant's argument that claim 19's requirement that (B) is based on styrene and butadiene is not suggested by the cited art is also unconvincing.

As pointed out in the body of the rejection, JP06234911 permits the diene to be either from isoprene or butadiene. Styrene is clearly the preferred vinyl aromatic monomer in both block polymers.

This application contains claims 3-6,13 and 14 drawn to an invention nonelected in the reply filed on 9/4/07. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 1796

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is 571-272-1084. The examiner can normally be reached on weekdays from 10 to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Buttner

2/21/08

/David Buttner/

Primary Examiner, Art Unit 1796